

**REMARKS**

In this amendment, previously presented claims 37, 45 and 46 have been cancelled without prejudice or disclaimer, and previously presented claims 24, 25, 26, 30, 32, 33, 38, 40, 41, 42, 43 and 44 are "currently amended". The remaining claims are as previously presented.

In reply to the Examiner's objection under 37 CFR 1.75(c) of Claims 44 to 46, Applicant has cancelled previously presented Claims 45 and 46 and as a result of this, it is respectfully submitted that the objection raised against these claims is now moot.

In response to the objection raised against Claim 44, Applicant wishes to respectfully draw to the Examiner's attention the fact that Claim 44 is not a dependent claim, and that as a consequence of this, Applicant does not understand how this claim could be "broader than the parent claim", and hence objectionable. Applicant has assumed that this objection has been raised by the Examiner against Claim 44 in error, and that as a consequence no amendment of this claim is in fact required. A dependent claim is a claim that refers to another claim. There is no reference in claim 44 to another claim. Therefore claim 44 is independent. Please note that Applicant has paid fees for four independent claims (24, 30, 32 and 44) in the fee worksheet.

Referring now to the Claim rejections raised by the Examiner under 35 USC §102(e) against Claims 24 to 43, Applicant respectfully notes that for such rejections to be justified ALL of the limitations of Applicant's claims must be found in the cited reference, US Patent No. 6870456 (to Gardner).

The Examiner will note that Claims 24, 32 and 44 are currently amended, and Applicant respectfully submits that

Gardner '456 fails to disclose or suggest **all** of the particular features now claimed.

In order to anticipate a claim, a reference must teach all the elements of a claim. See Verdegaal Bros., Inc. v. Union Oil Co., 814 F.2d 628, 631 (Fed. Cir. 1987). In addition, the reference must show the claimed invention "in as complete detail as is contained in the patent claim" in order to anticipate the claimed invention. Richardson v. Suzuki Motor Co., Ltd., 868 F.2d 1226, 1236 (Fed. Cir. 1989).

For example, Claim 24 refers to a transformer that is configured (i.e. is specifically designed e.g. to have a particular number of turns and layers) to pass a low frequency band waveform having a frequency of between about 10kHz and 2Mhz. Gardner '456, in contrast, discloses devices that operate in the GHz range (see Column 3, lines 51 to 57).

Although Gardner '456 mentions in passing that the shape and number of turns may be varied, Applicant notes that Gardner '456 only explicitly discloses a transformer with 2.75 turns (see line 48 of Column 2 of Gardner '456) - and that transformers with a small number of turns are typically associated with high operating frequencies (for example in the Gigahertz range). Applicant further notes that Gardner '456 teaches the adoption of a design that exhibits significant conductor-dielectric interaction, and that such interactions are only really of relevance at high frequencies (for example in the GHz range).

Applicant respectfully submits, therefore, that whilst Gardner does indeed mention modifying turn shape and number, the technical teaching of the reference is directed to an entirely different operating wavelength range than the transformer of the instant invention, and that a transformer "configured to" operate in the frequency range of the present invention is structurally different to the device disclosed in the Gardner '456 reference.

The Examiner will further note that Claims 24, 43 and 44 have also been amended to refer to "primary and secondary circuits [that] each include a plurality of turns and are configured and arranged to form a plurality of electrically conducting layers on a substrate". Support for this amendment may be found in lines 15 to 17 of Page 15 of the PCT publication from which this application is derived.

Applicant respectfully notes that such an arrangement is structurally different to that disclosed in Gardner '456. In particular, Fig. 2 of Gardner '456 refers to a manufacturing process (used for all embodiments disclosed in the reference, including the embodiment shown in Fig 14 (see Column 17, lines 38 and 39)) wherein a dielectric layer is provided over a substrate, a magnetic layer is provided over the dielectric and a conductor is then formed on the magnetic layer. It is immediately apparent, therefore, that Gardner '456 does not disclose "the formation of electrically conductive layers on a substrate" but instead discloses the formation of magnetic/dielectric layers on the substrate.

In light of this it is respectfully submitted that currently amended claims 24, 32 and 44 define a device that has a clear structural difference to the devices disclosed in Gardner '456.

Applicant would further point out to the Examiner that Claims 24, 32 and 44 also now refer to "primary and secondary conductors disposed adjacent to one another to provide, *in the absence of a ferromagnetic flux linkage pathway*, a local magnetic flux linkage between them" (support for this amendment may be found in lines 4 to 8 of Page 17 of the PCT publication from which this application is derived).

The absence of a ferromagnetic flux linkage pathway in the transformer of the present invention is another clear structural difference between the devices of the present invention and the devices of the reference.

As is immediately evident, for example from Fig. 2 of Gardner '456, the devices disclosed in the reference include a large amount of ferromagnetic material that is required to enable the devices to function as intended. This contrasts with the arrangement of the present invention where there are no ferromagnetic interactions, merely a local flux linkage between neighboring conductors of the first and second circuits.

In light of the foregoing, Applicant respectfully submits that each of claims 24, 32 and 44 define devices that have clear structural differences as compared with the devices disclosed in Gardner '456. Applicant further notes that Gardner '456 does not teach or suggest all limitations of Applicant's claims, and as a consequence Applicant respectfully petitions the Examiner to withdraw the rejection previously made under 35 USC 102(e).

As regards the remaining claims, Applicant respectfully submits that these claims are also allowable, if only by virtue of their dependency from an allowable main claim.

In light of the foregoing, Applicant respectfully requests consideration and allowance of the claims accompanying this amendment.

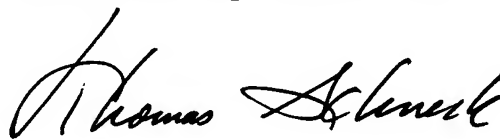
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I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Signed: Merle P. Garcia  
Typed Name: Merle P. Garcia

Date: August 22, 2007

Respectfully submitted,



Thomas Schneck

Reg. No. 24,518

Schneck & Schneck

P.O. Box 2-E

San Jose, CA 95109-0005

(408) 297-9733